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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Jamkhedkar, et al.

Application Serial No.: 10/082,777	Art Unit: 2837
Filed: February 24, 2001	Examiner: Kimberly Lockett
Title: Mode Enhanced Hindustani Music	Docket No.: Jamkhedkar-1

RESPONSE TO OFFICE ACTION DATED NOVEMBER 21, 2002

ASSISTANT COMMISSIONER FOR PATENTS,
WASHINGTON, D.C.

SIR:

The following remarks are submitted in response to the office action dated November 21, 2002. All the pending claims, claims 1-5, are rejected under Sections 112 and 103(a). These rejections are addressed in this response. No fee is due with this submission.

REMARKS

Claims 1-5 are pending and all pending claims are rejected. Applicants have thoroughly reviewed the rejections and the reasons provided in the Office Action. Applicants believe that the arguments presented herein will overcome the rejections. In view of the arguments presented herein, Applicants respectfully request the Examiner to reconsider the rejections, withdraw the same, and issue an early notice of allowance.

Claim rejections based on Section 35 USC §112

The Office Action states that Claims 1-5 omitted essential steps such omission amounting to a gap between the steps. The Office Action states how the notes were being produced, selected and fixed. Applicants respectfully traverse this rejection on the

Claim 1 is directed toward generating a new *thata* (a *thata* or mode is a way to describe the varying positions of the scales in a musical system such as the Hindustani musical system, see page 2, lines 6-7; page 4, lines 4-15).

Claim 2 is directed toward generating new *raag* (a *raag* is a melody and not a note – see p. 3, line 25) which is not disclosed or claimed in either Nelson or in Dinnan. Raaga is a method of organizing tunes based on certain principles. See p. 4, lines 16-17.

More particularly, the instant claims are directed toward a method of new Hindustani Raagas using a set of rules identified in this application. See page 6, lines 16-20; page 6, line 22 to page 13 line 4.

Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

Claim rejections based on Section 35 USC §103(a)

The Office Action states that claims 1-5 are obvious under Section 103(a) over Nelson (USP 4,960,029) in view of Dinnan et al (5,306,865) ("Dinnan II"). Applicants respectfully traverse this rejection for the following reasons.

The law related to Section 35 USC 103(a)

In a recent decision, the Federal Circuit emphasized the need for a thorough obviousness analysis, stated as follows:

As applied to the determination of patentability vel non when the issue is obviousness, "it is fundamental that rejections under 35 U.S.C. §103 must be based on evidence comprehended by the language of that section." In re Grasselli, 713 F.2d 731, 739, 218 USPQ 769, 775 (Fed. Cir. 1983). The essential factual evidence on the issue of obviousness is set forth in Graham v. John Deere Co., 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966) and extensive ensuing precedent. The patent examination process centers on prior art and the analysis thereof. When patentability turns on the question of obviousness, the search for and analysis of the prior art includes evidence relevant to the

finding of whether there is a teaching, motivation, or suggestion to select and combine the references relied on as evidence of obviousness. See, e.g., McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 1351-52, 60 USPQ2d 1001, 1008 (Fed. Cir. 2001) ("the central question is whether there is reason to combine [the] references," a question of fact drawing on the Graham factors).

"The factual inquiry whether to combine references must be thorough and searching." Id. It must be based on objective evidence of record. This precedent has been reinforced in myriad decisions, and cannot be dispensed with. See, e.g., Brown & Williamson Tobacco Corp. v. Philip Morris Inc., 229 F.3d 1120, 1124-25, 56 USPQ2d 1456, 1459 (Fed. Cir. 2000) ("a showing of a suggestion, teaching, or motivation to combine the prior art references is an 'essential component of an obviousness holding'") (quoting C.R. Bard, Inc., v. M3 Systems, Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998)); In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999) ("Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references."); In re Dance, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998) (there must be some motivation, suggestion, or teaching of the desirability of making the specific combination that was made by the applicant); In re Fine, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988) ("'teachings of references can be combined only if there is some suggestion or incentive to do so.'") (emphasis in original) (quoting ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984)).

The need for specificity pervades this authority. See, e.g., In re Kotzab, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) ("particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed"); In re Rouffet, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998) ("even when the level of skill in the art is high, the Board must identify specifically the principle, known to one of ordinary skill, that suggests the claimed combination. In other words, the Board must explain the reasons one of ordinary skill in the art would have been motivated to select

the references and to combine them to render the claimed invention obvious."); In re Fritch, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992) (the examiner can satisfy the burden of showing obviousness of the combination "only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references").

The court has stated that a "determination of patentability on the ground of unobviousness is ultimately one of judgment. In furtherance of the judgmental process, the patent examination procedure serves both to find, and to place on the official record, that which has been considered with respect to patentability. The patent examiner and the Board are deemed to have experience in the field of the invention; however, this experience, insofar as applied to the determination of patentability, must be applied from the viewpoint of 'the person having ordinary skill in the art to which said subject matter pertains,' the words of section 103. In finding the relevant facts, in assessing the significance of the prior art, and in making the ultimate determination of the issue of obviousness, the examiner and the Board are presumed to act from this viewpoint. Thus when they rely on what they assert to be general knowledge to negate patentability, that knowledge must be articulated and placed on the record. The failure to do so is not consistent with either effective administrative procedure or effective judicial review. The board cannot rely on conclusory statements when dealing with particular combinations of prior art and specific claims, but must set forth the rationale on which it relies."

Rejection of claims 1-5 over Nelson in view of Dinnan

Nelson (USP 4,960,029) is directed toward a device that assists students in determining musical scales.

Nelson summarized that invention as follows:

> The primary purpose of the structure of the present invention is to construct a teaching aid which can be easily and quickly learned by a music student which easily and quickly permits the students to ascertain the different musical scales.
>
> Another objective of the present invention is to construct a teaching aid that is small in size, easy to read,

> can be readily carried on one's person, and can be used to determine any musical scale of a vast number of different types of musical scales.
>
> The structure of this invention takes the form of a conventional slide rule in which there is a body which has a front surface and a back surface. On both the front and back surfaces are printed musical notes in specific arrangements. These notes in these specific arrangements by themselves are of very little value. However, to be associated with each series of notes is a cursor and this cursor is to be longitudinally movable on the body. The cursor is basically opaque but does have a plurality of specifically oriented transparent windows. The transparent windows associated with the front surface can be used to determine a wide number of different types of scales. The transparent windows located directly adjacent the back surface of the body is to be used for the purpose of determining the primary triads, or major keys. These primary triads are defined as the tonic note, the major third and the perfect fifth. These triads include the tonic chord, the fourth chord and the fifth chord.

Examiner cited Dinnan II, USP 5,306,865, for the proposition that Dinnan II disclosed a method of teaching Eastern Music. Dinnan II is not simply a method of teaching Eastern music. Dinnan II is related to an earlier patent, Dinnan I (USP 4,864,624), which explains the technique of Tru-Scale intonation that is described in Dinnan II. Tru-Scale is a system of music invented in Dinnan I and it is described as follows:

> The present invention relates to a new technique for eliminating overtone collisions in musical scales, and to a novel interval system for tuning of musical instruments wherein dissonances resulting from struck chords are eliminated. More particularly, the invention relates to an electronic musical instrument which reproduces musical scales so that normal struck chords, such as major fifths, do not have such dissonances. The invention is based on a wave system of communication which relies on a different basis of periodicity in wave propagation.¶...Throughout history, there have been a number of interval system[s] whose goal has been to minimize such dissonances. ... ¶ None of the above-mentioned interval systems suffices, by itself, to prevent overtone collisions. Various attempts have been made to combine various ones of these systems as

> appropriate in electronic musical instruments, to minimize the degree of overtone collision present. See Background Section in Dinnan I.

Examiner cited Dinnan II to reject the instant claims 1-5. At the cited portions, Dinnan II states as follows:

> Table I shows the present system of an Eastern Music Scale. The ratios, notes, frequency and intervals between notes are recorded. An apparent inconsistency in the present system in regard to A#.sup.1 and B.sup.1 (a repeated measure using the same frequency three times to make up the distance to C.sup.2) has been considered acceptable because of the 22/7 Pi (.pi.) tradition that has developed in Eastern Music, resulting in a 22 interval system. Further, the fractional extension of the frequencies, which will never close to whole numbers, is a result of the mathematical system used to measure wave transmission based upon the standard error of the mean and all its inherent inconsistencies. ... Table II, titled "Modified Eastern Music Tru-Scale Octave Transformation" shows an octave transformation utilizing twenty-four equally divided frequencies culminating in a 2:1 ratio. The interval is a consistent 12.5, and the frequencies, which are whole or half numbers, when extended will close or will have closed in the octave. While only a few scales are shown, the pattern for continuing the octave transformation (towards a higher or lower set of frequencies) may be seen radially and suggest applicability of the Modified Eastern Music Tru-Scale system to elimination of overtone collision, interference, etc. in any range of frequencies. In contrast to the present Eastern Music Systems (Sruti, or Thata), the novel Modified Eastern Music Tru-Scale Octave Transformation's separation provides a system of time-space relationships that allows a frequency to be used with other frequencies, which are compatible, and thus avoids the dissonance caused by all other interval systems. [Tables I and II omitted] ... ¶
> Table III, entitled "Modified Eastern Music Tru-Scale for Stringed Instruments Fixed Frets", is a listing of the twenty-four (24) fixed fret placements which give the distance in inches from the nut to the saddle in a stringed instrument for playing Eastern music, the intervals between each successive fret bar, and the ratio for each fret. While the Vina and Bin have been cited as an example of a stringed instrument, multiples of the distance might be used with any stringed instrument which would be apparent to

any artist familiar with the art of Eastern Music. [Table III omitted]

Thus, Dinnan is about inventing a new scale system, which Dinnan names "Tru-Scale" system. The present claims, however, are directed toward a method of creating melody and a method of identifying new modes in Hindustani music. It should be understood that in the instantly claimed invention, new frequencies or notes are not created. No mention is made as to the creation of a particular note at a particular frequency. As claimed herein, a melody may be created using a combination of notes as described in the instant application.

Nelson does not contemplate a method of creating a raaga in Hindustani music. Nor does Dinnan. The combination of Nelson with Dinnan would not have enabled a person of ordinary skill in the art to claim an invention as in claims 1 - 5. Applicants respectfully request reconsideration and a withdrawal of the rejections. Because the independent claims are believed to be non-obvious, it follows that the dependent claims are patentable as well. Applicants further request an early notice of allowance.

Respectfully Submitted,

By:_____

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Certificate of Faxing

I certify that on February 14 2003, I faxed this paper and all other papers referenced herein to the USPTO fax number (703) 872-9318.

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